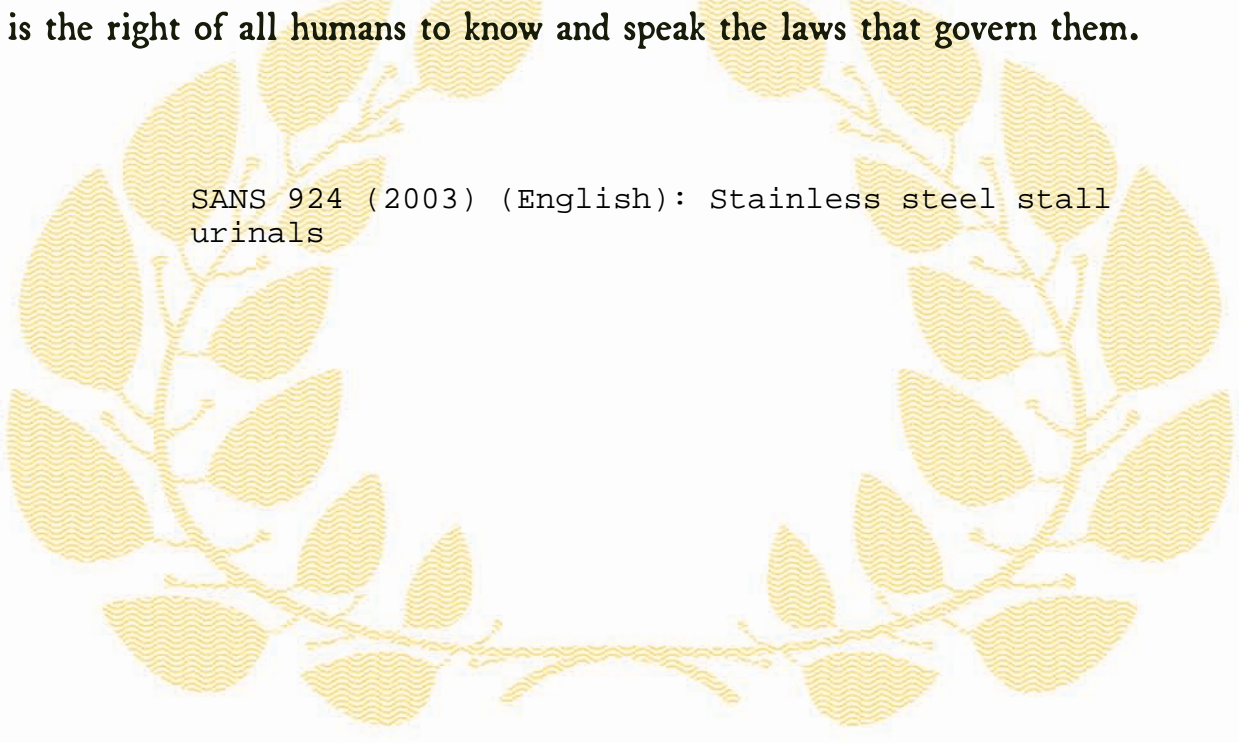




Republic of South Africa

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SANS 924 (2003) (English): Stainless steel stall
urinals



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SANS 924:2003

Edition 3

SOUTH AFRICAN NATIONAL STANDARD

Stainless steel stall urinals

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SANS 924:2003
Edition 3

Table of changes

Change No.	Date	Scope

Foreword

This standard was approved by National Committee SABS 1077, *Ferrous metals*, in accordance with procedures of SABS Standards division, in compliance with annex 3 of the WTO/TBT agreement.

This edition cancels and replaces the first revision (SABS 924:1972).

Annex A forms an integral part of this standard.

**Reaffirmed and reprinted in February 2011.
This standard will be reviewed every five years
and be reaffirmed, amended, revised or withdrawn.**

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SANS 924:2003

Edition 3

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Stainless steel stall urinals

1 Scope

This standard covers material, dimensional, and constructional requirements for three types of stainless steel stall urinals for installation in public buildings.

2 Definitions

For the purposes of this standard the following definitions apply:

2.1

acceptable

acceptable to the authority administering this standard, or to the parties concluding the purchase contract, as relevant

2.2

bright polished finish

finish obtained by polishing the surface without complete obliteration of previously existing grinding marks or other surface texture

2.3

defective

urinal that fails in one or more respects to comply with the appropriate requirements of the standard

2.4

directional satin finish

finish obtained by so grinding the surface with fine abrasives (without subsequent polishing) as to leave a silky appearance with the abrasive marks running in the same general direction

2.5

lot

not more than 100 urinals of the same type, size, and construction, from one manufacturer, submitted at any one time for inspection and testing

3 Types

Stainless steel stall urinals shall be of one of the following types, as specified by the purchaser (see annex A):

- a) **Facia type:** Of box construction, with treadplate, flanges, recesses, trough, and outlet(s); for installation against facia walls in single or multi-stall units (see figure 1).
- b) **Corner type:** Of semi-box construction, with treadplate, flanges, recesses, trough, and outlet(s); for installation in left- or right-hand corners against adjoining walls (see figure 2).
- c) **Recess type:** Of open (single plate) construction, with treadplate, flanges, trough, and outlet(s); for installation in a recess between two flanking walls (see figure 3).

4 Requirements

4.1 Material

The stainless steel used shall be 18/8 (AISI Type 304) stainless steel or other acceptable austenitic stainless steel of weldable quality.

4.2 Construction

The urinals shall be made by stamping, pressing, or fabricating, or by a combination of two or more of these methods.

4.3 Joints

All joints shall fit closely, and the whole of each joint shall be welded. Corner joints shall be radiused on the exposed surface to facilitate cleaning except that, in the case of the corner joints where sides and body meet, curved back urinals (see figure 5) shall be right-angled. All crevices on the exposed side of the joints shall be filled with weld metal, and where possible the welded joints shall be ground flush on the exposed surfaces. No solder shall be used on joints.

4.4 Welds

Welds shall be fusion welds produced by the inert gas arc welding process or by any other welding process that produces a weld having mechanical properties and corrosion resistance of at least the same order as those of the parent metal.

4.5 Finish

All exposed surfaces shall be free from buckles, dents, pits, deep scratches, and other defects and shall have a medium directional satin finish or a bright polished finish, as specified by the purchaser (see annex A). The urinals shall be free from dirt, grease, graphite, and other foreign matter.

4.6 Design and dimensions

4.6.1 The design shall be generally similar to the typical designs shown in figures 1, 2 or 3 (as relevant) and to the details shown in figures 4 and 5. The dimensions shall conform to the appropriate dimensions given in the figures and in tables 1 and 2, except that, if so required by the purchaser (see annex A), the length of single stall urinals may be a multiple of 600 mm, subject to a maximum of 3 600 mm.

4.6.2 The thickness of the material for urinals shall be as follows:

- a) overall length up to and including 1 800 mm: at least 0,90 mm; and
- b) overall length over 1 800 mm and up to and including 3 600 mm: at least 1,20 mm.

4.6.3 Vertical and sloped back urinals with lengths exceeding 900 mm shall be stiffened with shallow vertical ribs that are equidistantly spaced at $\pm 5,0$ mm centres.

4.6.4 Curved back urinals of 1 830 mm or more, shall be stiffened with a flat steel bar of 30 mm \times 5 mm in section, profiled to the curve and over the full length of the curve, centrally placed and welded to the urinal at the top and bottom. Curved back urinals of 3 500 mm, or more, shall have one stiffening bar every complete 1 750 mm, equally spaced over the trough length of the urinal.

Table 1 — Overall length, *B*
(see figures 1, 2, and 3)

Dimensions in millimetres						
1	2	3	4	5	6	7
Type of urinal	1 stall	2 stalls	3 stalls	4 stalls	5 stalls	6 stalls
Facia	600	1 200	1 800	2 400	3 000	3 600
Corner	600	1 200	1 800	2 400	3 000	3 600
Recess	600	1 200	1 800	2 400	3 000	3 600
NOTE Subject to a tolerance of -10 mm.						

Table 2 — Dimensions other than *B*
(See figures 1, 2 and 3)

1	2	3
Dimensions	Requirement mm	Change to
Overall height, <i>A</i> ^a	1 200 \pm 5	See ^a below
Overall depth, <i>C</i> ^d	280 \pm 5	No change
Width of wall not adjacent to masonry, <i>F</i> ^b	50 \pm 5	50 +5 –10
Width of wall adjacent to masonry, <i>F</i> ^b	50 \pm 5	50 +5 –10
Height of front of tread plate, <i>D</i>	40 \pm 5	No change
Width of key, <i>E</i> ^e	15 \pm 5	See ^e below
Inside depth, <i>G</i> ^c	305 \pm 5	No change
^a Alternatively 1 160 \pm 5 ^b Alternatively 65 \pm 5 ^c Alternatively 250 \pm 5 ^d Alternatively 330 \pm 5 ^e Alternatively 40 \pm 5		

4.7 Troughs

Troughs shall have a slope of not less than 1 mm in 100 mm of trough length, from the sides to an acceptable outlet to fit a 75 mm screwed nipple of 75 mm nominal diameter or, alternatively, a combination outlet of 70 mm and 110 mm nominal diameter, to suit standard PVC and cast iron waste pipes (see figure 4). The outlet shall be on the left or right side, or in the centre of the urinal, or as specified by the purchaser (see annex A), and shall not be less than 125 mm or more than 150 mm wide.

4.8 Backs

Backs shall be vertical, sloped, or curved, as specified by the purchaser (see annex A). The offset of the back of the tiling (or wall) key from the centre of the outlet shall be (120 ± 3) mm for straight and curved backs and (185 ± 3) mm for sloping backs (see figures 4 and 5).

4.9 Tread plates

Each urinal shall have a tread plate with a slight slope of not less than 1 in 3 towards the trough and a raised bead along the front. The bead shall have a turndown, a horizontal projection and, if so required by the purchaser (see annex A), an upward flange (see figure 4) to facilitate fixing to the floor.

4.10 Tiling keys

Each urinal shall have a tiling key, at least 15 mm wide, along the top and sides, except that when so required by the purchaser (see annex A), it shall have a wide wall key instead of a tiling key (see figures 1, 2 and 3).

5 Marking

5.1 Marking

The manufacturer's name or trade name or trademark shall appear in legible and indelible marking on the body of each urinal.

5.2 Method of marking

The marking shall be embossed or stamped on the body of the urinal or on a stainless steel plate securely attached to the body of the urinal.

6 Sampling

The following sampling procedure shall be applied in determining whether a lot complies with the appropriate requirements of this standard. The samples so taken shall be deemed to represent the lot for the respective properties:

- a) **Sample for inspection:** From each lot take at random the number of urinals shown in column 2 of table 3 relative to the appropriate lot size shown in column 1.
- b) **Sample for testing:** From each sample taken in accordance with 6(a) take at random the number of urinals shown in column 3 of table 3 relative to the appropriate lot size shown in column 1.

Table 3 — Sample size

1	2	3	4
Lot size, number of urinals	Sample size, number of urinals		Acceptance number
	Sample for inspection	Sample for testing	
Less than 20	All	1	0
20 – 100	20	2	1

7 Compliance with the standard

The lot shall be deemed to comply with the requirements of this standard if, after inspection and testing,

- a) the number of defectives found in the sample taken in accordance with 6(a) does not exceed the appropriate acceptance number given in column 4 of table 3, and
- b) no defective is found in the sample taken in accordance with 6(b).

8 Inspection and methods of test

8.1 Inspection

Inspect and check the dimensions of the sample taken in accordance with 6(a) for compliance with all the appropriate requirements of clauses 3, 4, and 5.

8.2 Chemical analysis of stainless steel

Use any approved method to determine the chemical composition of the steel used in each urinal in the sample taken in accordance with 6(b). Check for compliance with the requirements of 4.1.

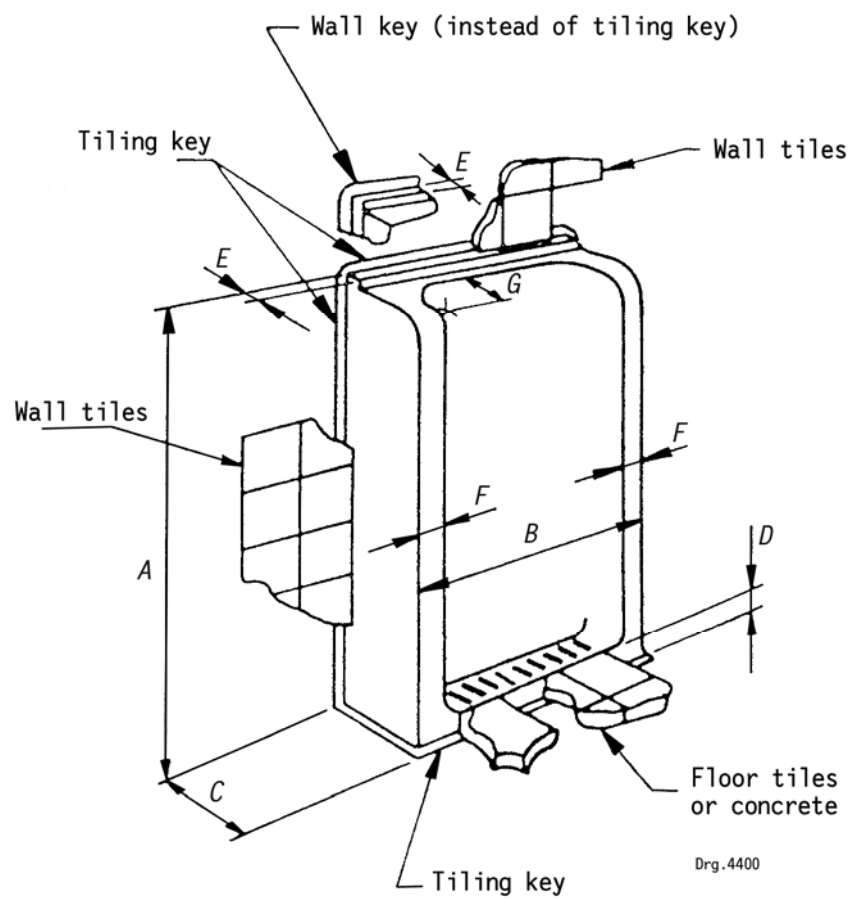


Figure 1 — Facia type stall urinal (see tables 1 and 2)

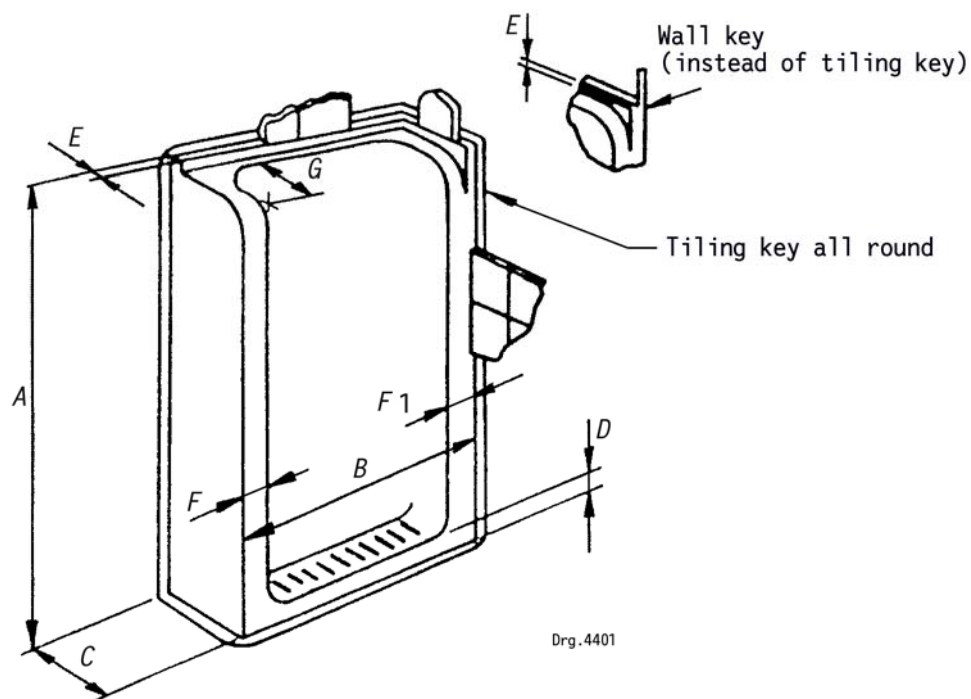


Figure 2 — Corner type stall urinal (right-hand) (see tables 1 and 2)

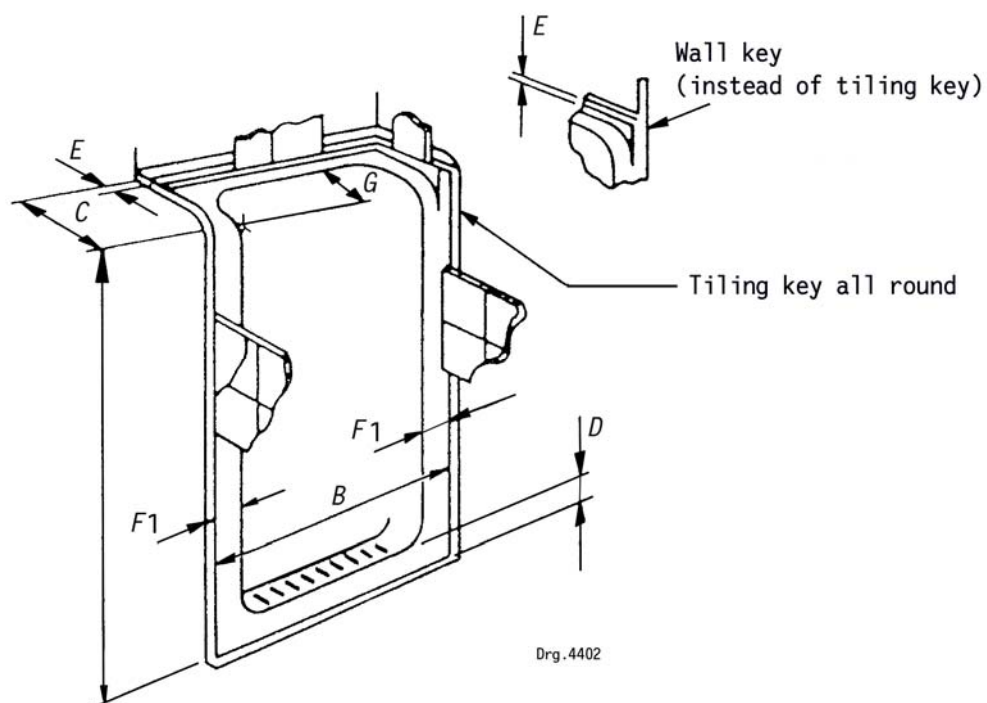


Figure 3 — Recess type single stall urinal (see tables 1 and 2)

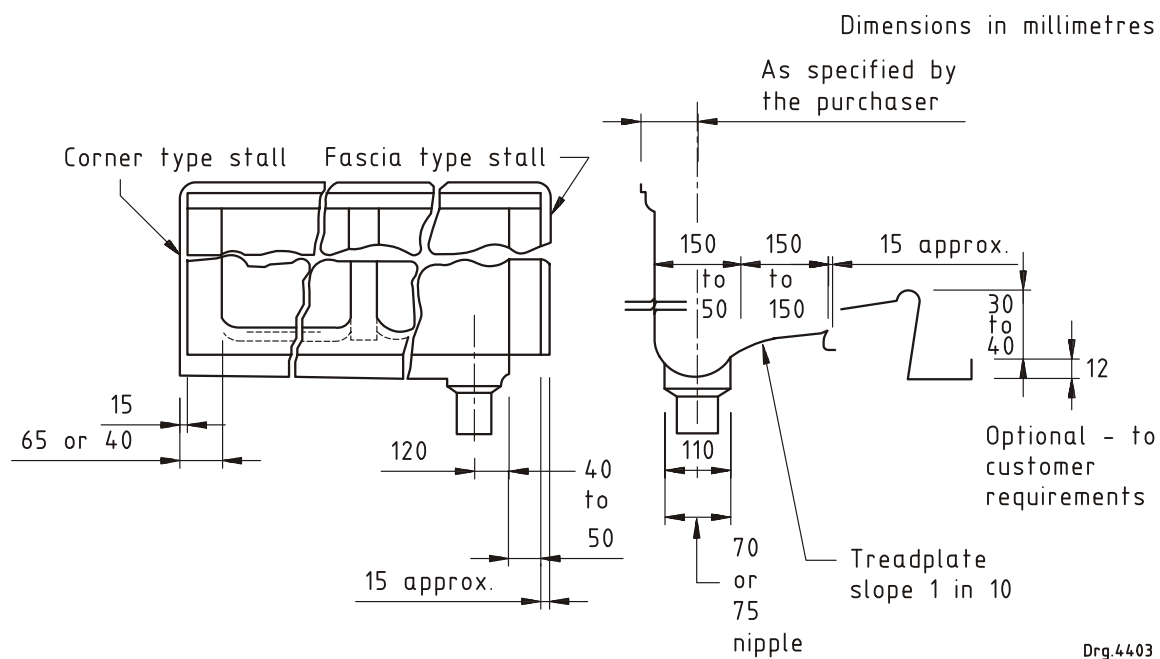
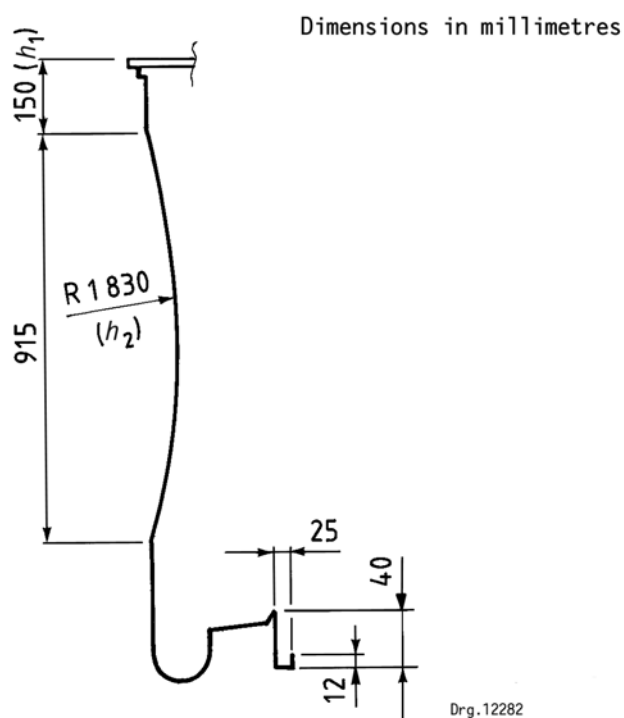


Figure 4 — Typical section through stall urinals



NOTE The height h_1 may alternatively be 200 ± 5 to accommodate a combination box.

Figure 5 — Section through curved back urinal

Annex A
(normative)

Notes to purchasers

The following requirements shall be specified in tender invitations and in each order or contract:

- a) the type of urinal (facia, corner, or recess) required and, in the case of the corner type, whether required for a left- or a right-hand corner (see clause 3);
- b) the finish (see 4.5);
- c) the number of stalls and, when relevant, the length of a single stall urinal (see 4.6.1);
- d) the position of the outlet (see 4.7);
- e) whether vertical, sloped, or curved backs are required (see 4.8); and
- f) whether an upward flange is required (see 4.9).
- g) whether a tiling key or a wall key is required (see 4.10).

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